

### **REMARKS**

Claims 1-20 are now pending. The Examiner has rejected claims 1-20.

#### **Claim Rejections under 35 U.S.C. § 103**

Claims 1, 2, 4-8, and 10-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable by Bremer (U.S. No. 6,546,090) in view of Dirschedl (U.S. No. 6,262,994).

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable by Bremer (U.S. No. 6,546,090) in view of Dirschedl (U.S. No. 6,262,994), and further in view of Gross et al. (U.S. No. 6,549,520)

With regard to an obviousness rejection, MPEP 2142 states that in order for a *prima facie* case of obviousness to be established, three basic criteria must be met, one of which is that the reference or combination of references must teach or suggest all the claim limitations. Further, MPEP 2143.01 states that “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination”, and that “although a prior art device ‘may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so’” (citing *In re Mills*, 916 F. 2d 680, 16 USPQ 2d 1430 (Fed Cir. 1990)). Moreover, MPEP 2143.01 also states that the level of ordinary skill in the art cannot be relied upon to provide the suggestion . . . ,” citing *Al-Site Corp. v. VSI Int’l Inc.*, 174 F. 3d 1308, 50 USPQ 2d. 1161 (Fed Cir. 1999).

Regarding independent claim 1 and its dependent claims (i.e., claims 2-6), amended claim 1 recites “[a] method of restricting symbol size in an ADSL system comprising: obtaining a data rate during initialization; comparing the data rate to a threshold; transmitting symbols using one of a multiple of 8, 4 or 2 bits per symbol if the data rate is above the threshold; and transmitting symbols using an integer number of bits per symbol if the data rate is below the threshold.”

It is respectfully submitted that the cited prior art, Bremer in view of Dirschedl, does not teach the claimed invention of claim 1. More specifically, Dirschedl does not disclose a system that obtains a data rate during initialization. Instead, Dirschedl discloses a system that collects data regarding the error rate, which is different from data rate. Furthermore, in transmission

systems, error rate indicates the number of erroneous bits per number of bits transmitted, whereas data rate indicates the number of bits transmitted in a given time.

Also, it is respectfully submitted that the prior art, Bremer in view of Dirschedl and further in view of Gross, does not teach the claimed invention of claim 1. More specifically, contrary to Examiner's statement, Gross does not state that "information regarding a data rate is a known functional equivalent to a maximum receive data rate." Instead, Gross states that in "the absence of certain disturbances... the modem of [the] invention transmits data at a rate determined by the transmission capabilities of the system without regard to such disturbances. Preferably, this is the maximum data rate that can be provided for the particular communications subchannel, subject to predefined constraints such as maximum bit error rate, maximum signal power, etc." (Gross, Column 4, lines 24-32). So Gross at best is saying that an error rate can have an effect on the maximum data rate that can be achieved in a system, and that is certainly not equivalent to saying that a data rate and an error rate are equivalent, as stated by the Examiner.

Regarding independent claim 7 and its dependent claims (i.e., claims 8-12), amended claim 7 recites "[a] method of restricting symbol size in an ADSL system comprising: obtaining a data rate during initialization; comparing the data rate to a threshold; transmitting a message to choose a symbol size that is one of a multiple of 8, 4 or 2 bits per symbol if the data rate is above the threshold; and transmitting a message without restriction as to the size of symbols if the data rate is below the threshold."

It is respectfully submitted that the cited prior art, Bremer in view of Dirschedl, does not teach the claimed invention of claim 7. More specifically, Dirschedl does not disclose a system that obtains a data rate during initialization. Instead, Dirschedl discloses a system that collects data regarding the error rate, which is different from data rate. Furthermore, in transmission systems, error rate indicates the number of erroneous bits per number of bits transmitted, whereas data rate indicates the number of bits transmitted in a given time.

Also, it is respectfully submitted that the prior art, Bremer in view of Dirschedl and further in view of Gross, does not teach the claimed invention of claim 7. More specifically, contrary to Examiner's statement, Gross does not state that "information regarding a data rate is a known functional equivalent to a maximum receive data rate." Instead, Gross states that in

“the absence of certain disturbances... the modem of [the] invention transmits data at a rate determined by the transmission capabilities of the system without regard to such disturbances. Preferably, this is the maximum data rate that can be provided for the particular communications subchannel, subject to predefined constraints such as maximum bit error rate, maximum signal power, etc.” (Gross, Column 4, lines 24-32). So Gross at best is saying that an error rate can have an effect on the maximum data rate that can be achieved in a system, and that is certainly not equivalent to saying that a data rate and an error rate are equivalent, as stated by the Examiner.

Regarding independent claim 13 and its dependent claims (i.e., claims 14-20), claim 13 recites “[an] ADSL modem system comprising: a first modem having a first transmitter and a first receiver; a second modem having a second transmitter and a second receiver, the second modem estimating a maximum receive data rate of the first modem and comparing it to a threshold, the second transmitter transmitting a message to the first receiver that instructs the first transmitter to transmit data using a pre-selected number of bits per symbol based on the comparison.”

It is respectfully submitted that the cited prior art, Bremer in view of Dirschedl and further in view of Gross, does not teach the claimed invention of claim 13. More specifically, contrary to Examiner’s statement, Gross does not “teach that an error rate is an art accepted equivalent to a maximum achievable data rate.” Instead, Gross states that in “the absence of certain disturbances... the modem of [the] invention transmits data at a rate determined by the transmission capabilities of the system without regard to such disturbances. Preferably, this is the maximum data rate that can be provided for the particular communications subchannel, subject to predefined constraints such as maximum bit error rate, maximum signal power, etc.” (Gross, Column 4, lines 24-32). So Gross at best is saying that an error rate can have an effect on the maximum data rate that can be achieved in a system, and that is certainly not equivalent to saying that a data rate and an error rate are equivalent, as stated by the Examiner.

By this response, claims 1-12 have been amended.


Application. No.: 09/882,100  
Response dated September 18, 2006  
Reply to Office action of May 17, 2006

Based on at least the foregoing, Applicants believe that claims 1-20 are in condition for allowance. If the Examiner disagrees or has questions regarding this submission, Applicants invite the Examiner to telephone the undersigned at (312) 775-8000.

The Commissioner is hereby authorized to charge additional fees or credit overpayments to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Date: September 18, 2006

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Chris Winslade', written over a horizontal line.

Christopher C. Winslade  
Reg. No. 36,308

McAndrews, Held & Malloy, Ltd.  
500 West Madison St., Ste. 3400  
Chicago, IL 60661  
(312) 775-8000